David Groff CS 192 Description of Code

Overview

- New settings for a project (that require code) ---> Significant ones in bold
    - **Paging schemes** (difficulty: normal)
    - Paging records
    - **Notify schemes** (difficulty: normal)
    - **Customize messages** (difficulty: easy)
    - **Provide timing for when messages go out** (difficulty: hard)
    - **VHD's send in messages with an HLP format** (difficulty: hard)
    - **VHD's send in messages with an REQ format** (difficulty: easy)
    - **Messages include doctor's name** (difficulty: easy)
    - **Messages include doctor's mobile** (difficulty: easy)
    - **Select which number to use** (difficulty: easy)
    - **Timezone selection** (difficulty: normal)
    - **VHD requests in a project will page doctor's in that project** (difficulty: normal)
- New admin capabilities (that require code)
    - Generate a temporary password
    - Set admin emails (to email when someone creates a new project)

Definitions

Project: A hospital or region with 1 set of doctors, Village Health Directors, and Project Managers. Messages from one project's villages typically are not answered by another project's doctors.
VHD (Village Health Director): Village leader who is trained to send SMS text messages on behalf of their community's patients.
PM (Project Manager): The head(s) of the local program.
REQ: Stands for "Request." Every SMS that starts with "REQ" comes from a VHD and indicates that it is a new patient's case. After the REQ comes patient-specific information such as name, age, contact number, and the patient's symptoms.
HLP: Stands for "Help." Every SMS that starts with "HLP" is from a patient whose information (name, age) has already been uploaded into the system and can just start typing their symptoms after the HLP.

Deadlines

1) done by December 10th
2) done by December 16th

- Code: how and when
- Test: how and when

Code: Paging Schemes (allowing a project to customize the order doctors are paged)

- Things to engineer: what order to put doctors in, when a random doctor can be paged, how many doctors to page at once.

- How: each project has a list of schemes that specify the priority. the default is for it to pick a random doctor. if the priority has been used for that case, then it is not considered (i.e. once a case uses a scheme with priority 1, it no longer uses any more priority 1 schemes). it uses priority one schemes all at the same time. A scheme can consist of a random doctor so multiple random doctors can be paged at the same time. This occurs if multiple schemes with the same priority are set to page random doctors. That doctor can also be specified.
Test: the simulation will create a project with different paging schemes and simulate rounds of paging.
Done by: 12/10
**There are parameters that determine how many minutes a case pages doctors for and how many minutes it waits before doing the next round of paging which interacts with this code.

Code: Notify Schemes (allowing a project to decide what messages are sent to which project managers

- Requires finding all the code that notifies the existing project managers and making it particular to both the project manager and the project. The current system “hard-code” sends a messages to a project manager at random times. So it requires making the notifications more centralized and organized.
Test: simulate setting a project manager to receive a notification (such as new REQ sms) and simulate that action to make sure they would be paged. Then, simulate setting them to not receive the REQ SMS and make sure they are not paged.
Done by: 12/10

Code: Customize messages (allowing a project to send custom messages instead of the same message) → useful for projects in areas with different languages

- Requires notifications coming out of the database instead of out of hard-code.
Test: Put the customized message in the database, when the action is sending the notification, make sure it is the custom message.
Done by: 12/10

Code: VHDs who bring in patients use REQ format.

- Take the existing code and make it so that this feature can be turned on or off. Also allow it work and route requests properly for the project (as in save for the project and embed whatever logic necessary for saving it under that project).
Test: simulate sending REQ messages into the system.
Done by: 12/10

Code: Messages can include doctor’s name/mobile

- If this is turned off, it must format messages to be appropriate. This requires finding the places where messages have that info and having it instead query the database.
Done by: 12/10

Code: Provide timing for when messages go out (project can set the timings for closing cases that doctors did not answer to, cases that get no response, when PMs are alerted, how often doctors are paged).

- Write some logic for allowing the timings to work out. The case has to close after PMs are alerted.
- Make this project-specific.

Test: Have to construct data and run the cron. There is no way to run this simulation than by constructing all the pieces of data that go into the calculation.
Done by: 12/16

Code: VHDs who are patients can send in messages with an HLP format.
- Projects can specify that they have patients sending in their own messages and can upload that information. When a message comes in, it must decide if that project allows that format, if the VHD is actually a patient and then actually process the text once it recognizes the HLP format.
- The message must be routed and integrated into the existing paging schemes and format of the REQ. So wherever code gets info out of a REQ, it must be changed to get info out of an HLP or a REQ.

Test: Simulate sending HLP messages into the system and see what messages it sends to doctors and project managers and if it acts properly
Done by: 12/16

Auxilary:
- activate the patient type for of VHD's for for Udaipur project (tell Sheela where and how to enter names)
- set it so that a patient VHD automatically deactivates after ten cases (and allow Sheela to reactivate them and deactivate them)
- MEDgle Integration